

FIG. 1

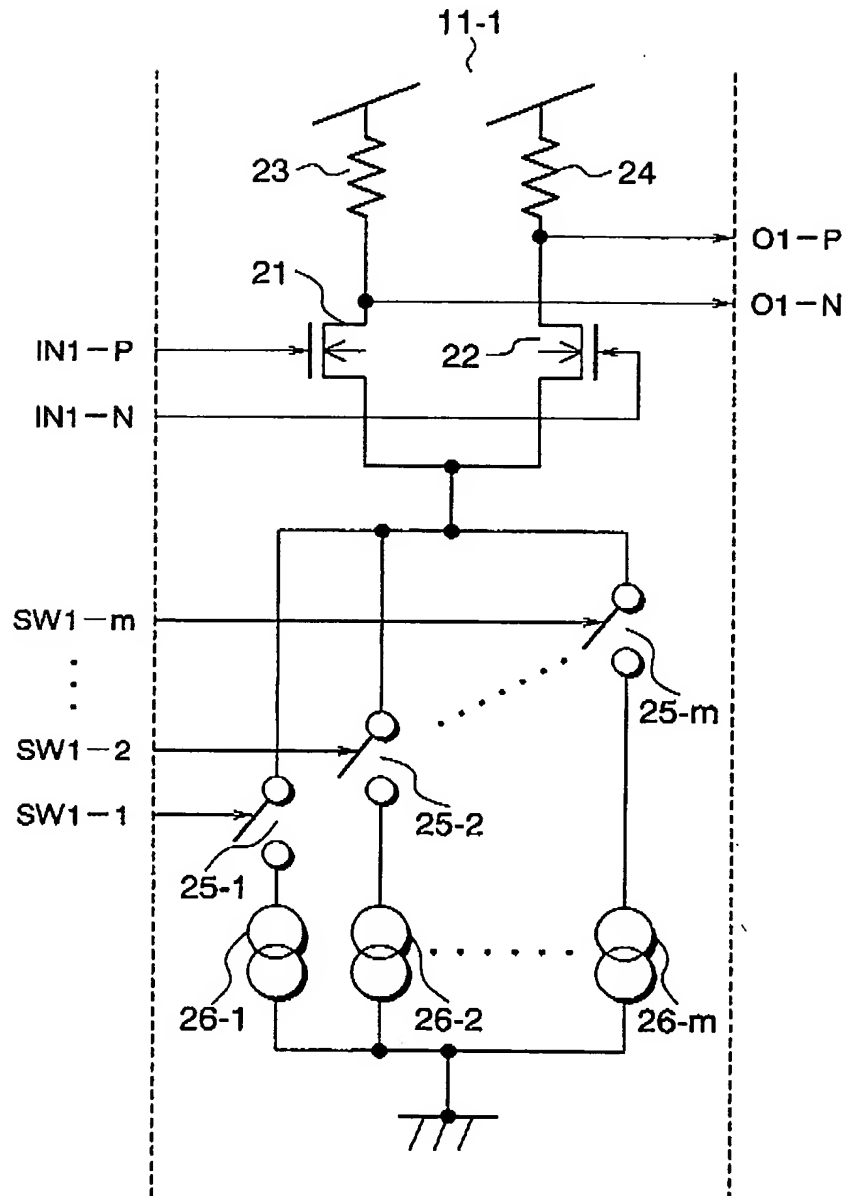


FIG. 2

		STATE A	STATE B	STATE C	STATE D
n × m DIGITAL CONTROL SIGNAL	SW1-1	on	off	off	on
	SW1-2	on	on	off	on
	SW1-3	on	on	on	off
	⋮	⋮	⋮	⋮	⋮
	SW1-(m-1)	on	on	on	off
	SW1-m	on	on	on	off
	<hr/>				
	SW2-1	off	on	on	off
	SW2-2	off	off	on	off
	SW2-3	off	off	off	off
	⋮	⋮	⋮	⋮	⋮
	SW2-(m-1)	off	off	off	off
	SW2-m	off	off	off	off
	<hr/>				
		off	off	off	off
		⋮	⋮	⋮	⋮
		off	off	off	off
	<hr/>				
	SWn-1	off	off	off	off
	SWn-2	off	off	off	off
	SWn-3	off	off	off	on
	⋮	⋮	⋮	⋮	⋮
	SWn-(m-1)	off	off	off	on
	SWn-m	off	off	off	on

FIG. 3

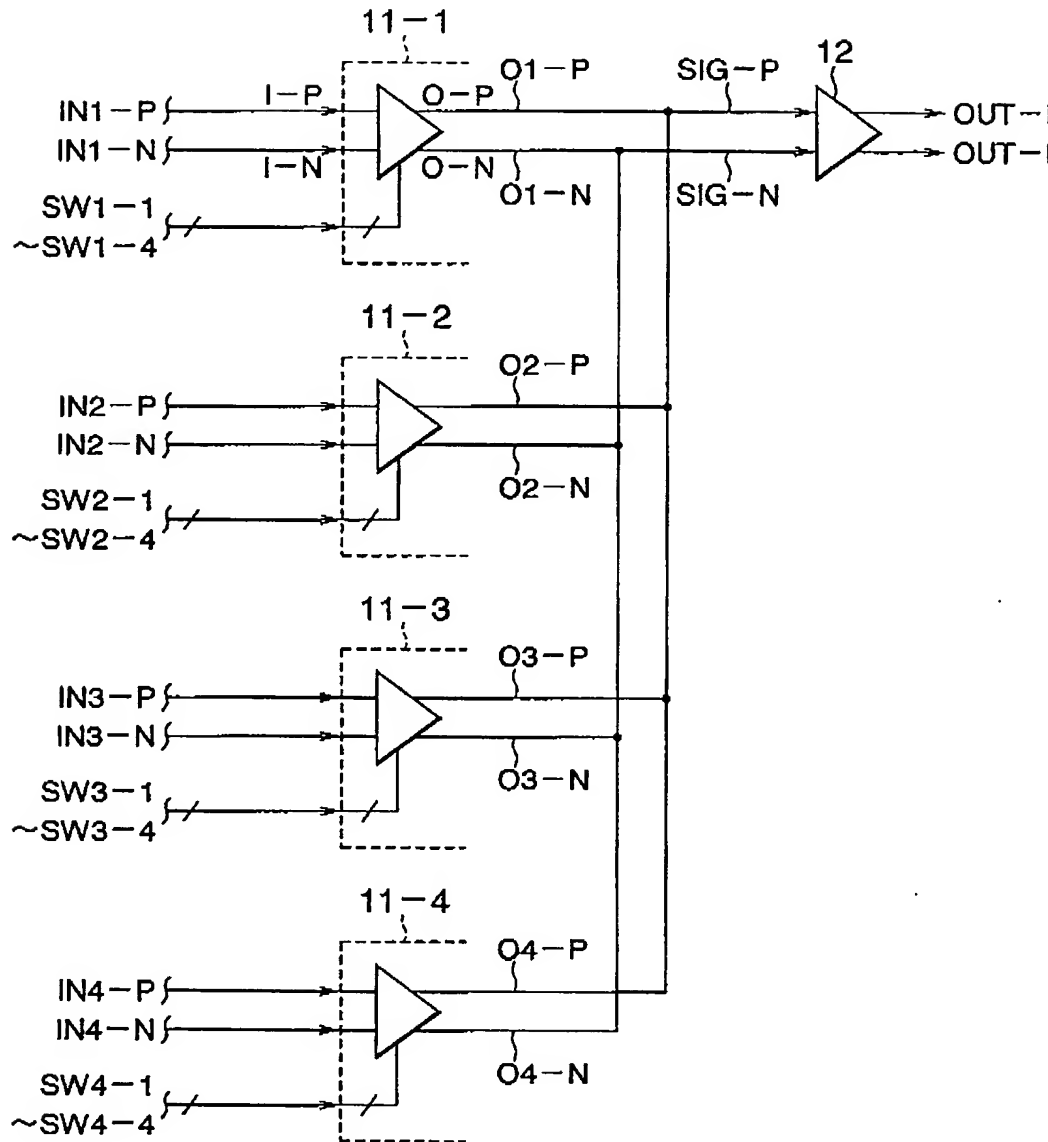


FIG. 4

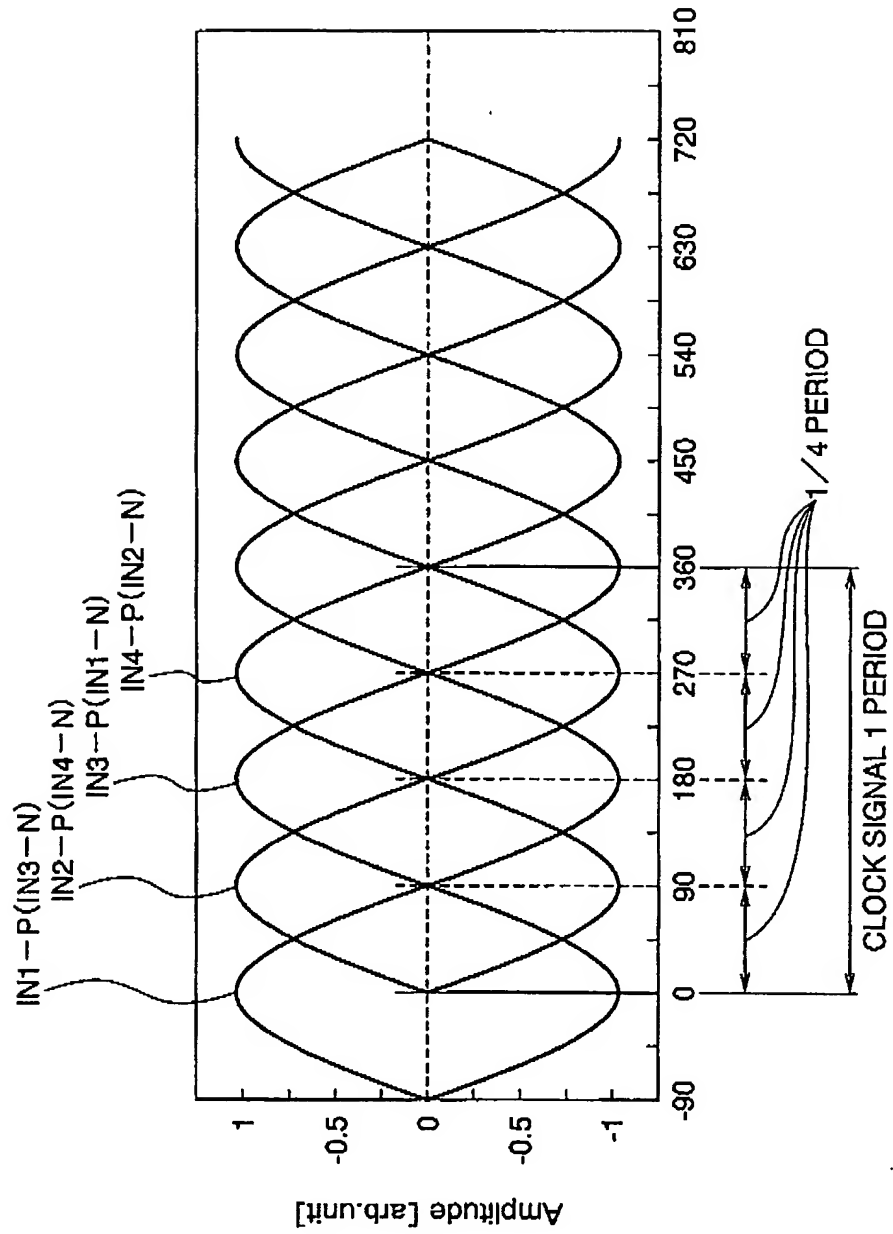


FIG. 5

		STATE1	STATE2	STATE3	STATE4	STATE5
4 X 4 DIGITAL CONTROL SIGNAL	SW1-1	on	off	off	off	off
	SW1-2	on	on	off	off	off
	SW1-3	on	on	on	off	off
	SW1-4	on	on	on	on	off
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <math>\left. \begin{matrix} \text{SW1-1} \\ \text{SW1-2} \\ \text{SW1-3} \\ \text{SW1-4} \end{matrix} \right\} 4 \text{ SIGNALS}</math> </div> <div style="text-align: center;"> <math>\left. \begin{matrix} \text{SW2-1} \\ \text{SW2-2} \\ \text{SW2-3} \\ \text{SW2-4} \end{matrix} \right\} 3 \text{ SIGNALS}</math> </div> <div style="text-align: center;"> <math>\left. \begin{matrix} \text{SW3-1} \\ \text{SW3-2} \\ \text{SW3-3} \\ \text{SW3-4} \end{matrix} \right\} 2 \text{ SIGNALS}</math> </div> <div style="text-align: center;"> <math>\left. \begin{matrix} \text{SW4-1} \\ \text{SW4-2} \\ \text{SW4-3} \\ \text{SW4-4} \end{matrix} \right\} 1 \text{ SIGNAL}</math> </div> </div>					
	SW2-1	off	on	on	on	on
	SW2-2	off	off	on	on	on
	SW2-3	off	off	off	on	on
	SW2-4	off	off	off	off	on
	SW3-1	off	off	off	off	off
	SW3-2	off	off	off	off	off
	SW3-3	off	off	off	off	off
	SW3-4	off	off	off	off	off
	SW4-1	off	off	off	off	off
	SW4-2	off	off	off	off	off
	SW4-3	off	off	off	off	off
	SW4-4	off	off	off	off	off

FIG. 6

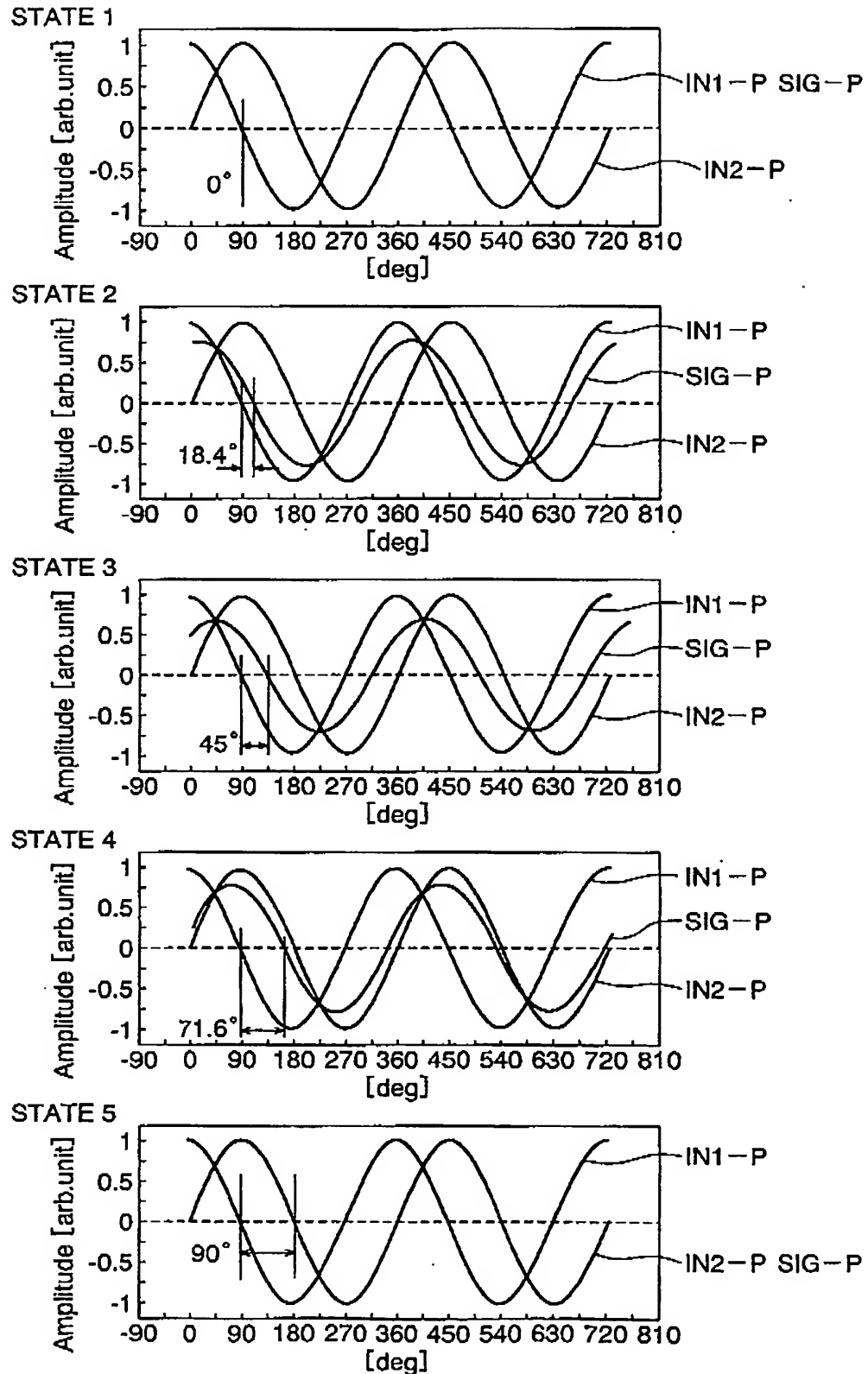


FIG. 7

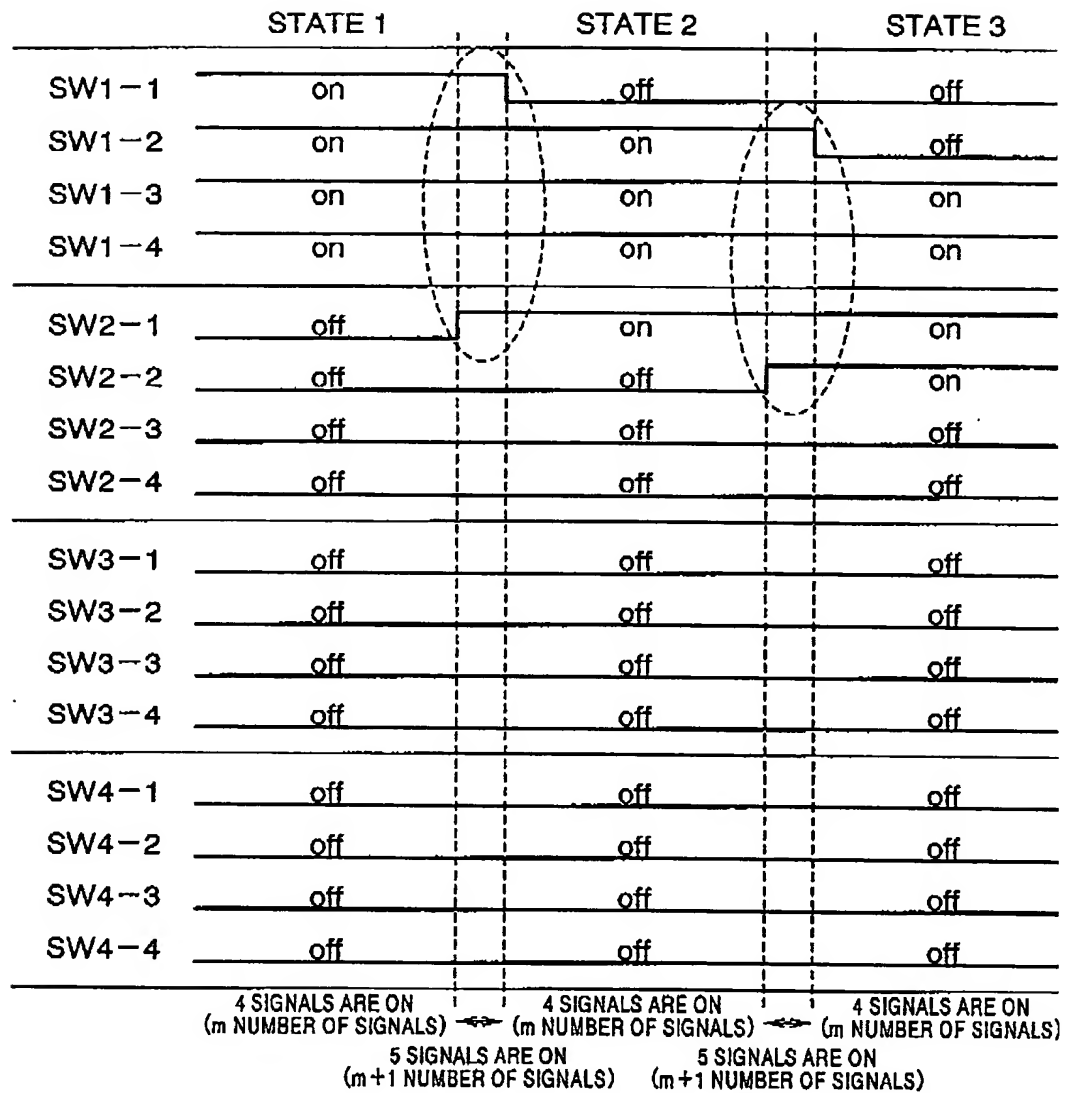


FIG. 8



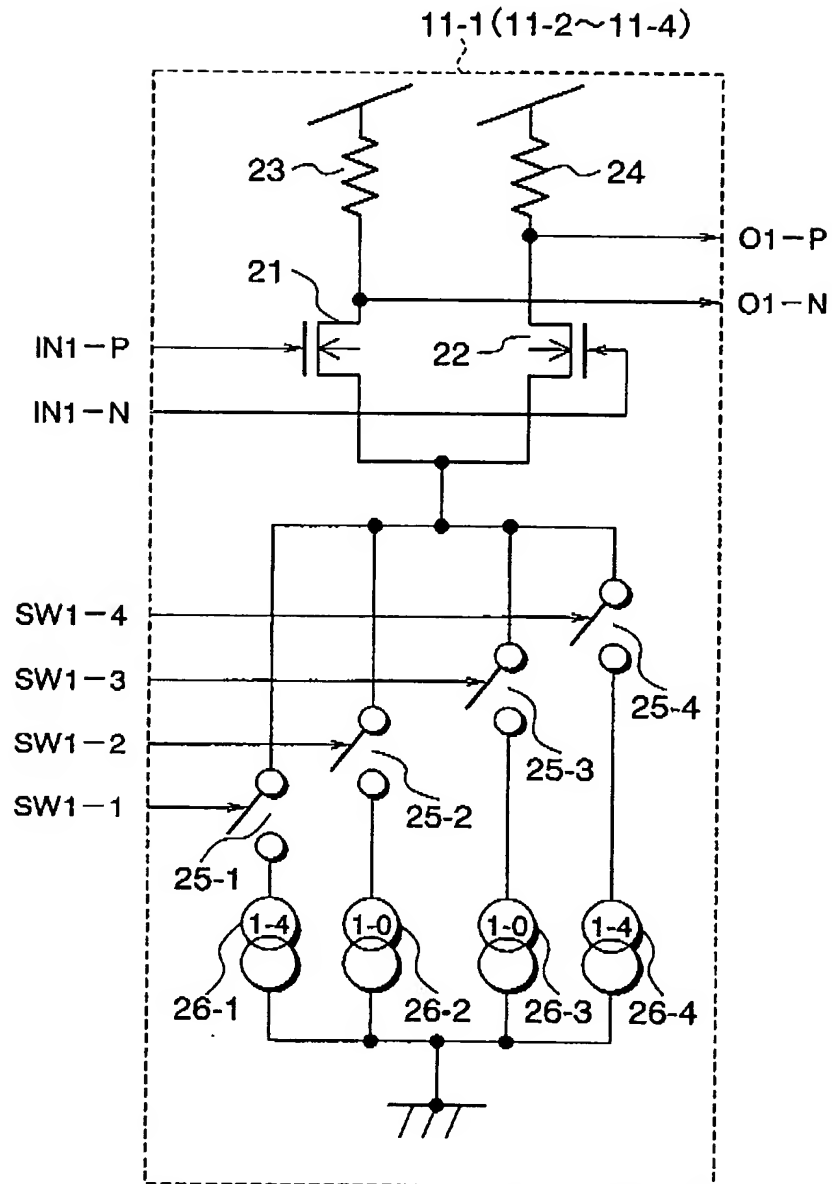


FIG. 9